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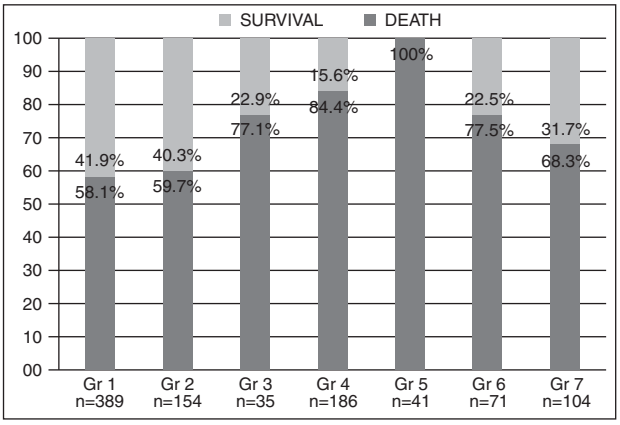
Background: The great majority of successfully resuscitated out-of-hospital cardiac arrest (OHCA) patients will subsequently die during their ICU and hospital stay. Several studies have previously described the main causes of OHCA but the impact of aetiology on the outcome and the timing and value of diagnostic procedures such as coronary angiogram remains controversial.

Methods: We analysed the causes of cardiac arrest in a prospective database from a tertiary reference. We compared the mortality observed in the subgroups of patients with a cardiac or a non-cardiac cause of arrest.

Results: 983 patients were admitted from January 2000 to August 2008.In patients without an obvious non-cardiac cause of arrest, a coronary angiogram followed if necessary by a coronary angioplasty was performed at admission. The median age was 58 years (range 84.39) and 74% were male. Past or current cigarette smoking was noted in 54%, hypertension in 35% and hypercholesterolemia in 23%. The causes of OHCA were an acute coronary syndrome (ACS=Gr1) in 389 pts (40%), primary ventricular arrhythmia (VT-FV=Gr2) in 154 pts (16%), cardiac failure (=Gr3) in 35 pts (3%), acute respiratory failure (=Gr4) in 186 pts (19%), neurological failure (=Gr5) in 41 pts (4%), unknown (=Gr6) in 71 pts (7%) and others causes(=Gr7) in 104 pts (11%). Overall, the mortality rate of the entire cohort was 68%; mortality rates observed in each subgroup are displayed in the figure.



January 15th, Friday 2010

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Central Venous Oxygen Saturation is a Strong Predictor of Outcome in Patients with Cardiogenic Shock

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Introduction: Central venous oxygen saturation (SvO2) provides an accurate assessment of oxygen delivery and organs consumption balance, and correlate with outcome in extra cardiac shock. Its prognosis value has never been specifically validated in heart failure patients with cardiogenic shock.

Methods: SvO2 was prospectively assessed in 27 patients (60±17 years, 17 male, LVEF=25±6%) admitted for heart failure with cardiogenic shock. SvO2 before and after 24 hours (24H SvO2) of intra-venous inotropic and diuretic support in patients with cardiogenic shock was compared to control subject with compensate heart failure (n=12) and to in hospital outcome (death and heart transplant).

Results: During hospitalisation period, major cardiovascular event occurred in 10 (36%) patients (6 deaths, 4 heart transplants). In patients with cardiogenic shock, admission SvO2 was lower than in patients with compensated heart failure (50±12, 66±6, 95% CI>58%) but increased after 24H of treatment (50±12, 59±8, p=0.002). Importantly, improvement in Sv02 at 24H (>58%, n=15) was associated with an excellent in hospital outcome (93%, 14/15), while a persistently low ScvO2 at 24H (< 58%) correlated with the occurrence of major cardiac adverse outcome (75%, 9/12).

Furthermore, there was no difference regarding to clinical or echographical features between event free and poor outcome groups.

Conclusion: Change in SvO2 under intra-venous inotropic and diuretic treatment is a strong predictor of outcome in patients with cardiogenic shock.

January 16th, Saturday 2010

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Type B aortic syndrome: comparison of medical and endovascular management

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Background: Type B aortic syndrome is one of the most life-threatening aortic condition. The management of descending aortic diseases remains controversial. The aim of this study was to compare the results of medical and endovascular treatments of type B aortic syndromes.

Method: The medical records of patients with type B aortic syndrome between 2000 and 2009 were retrospectively revised. Type B aortic syndromes consisted of acute aortic dissection (n= 71), chronic aortic dissection (n=32), aortic hematoma (n=27) or penetrating ulcers (n=4). Patients with traumatic aortic ruptures were excluded. The population was divided into two groups. Patients of group A were medically treated (n=76) and patients of group B underwent endovascular management (n= 58). Short and long term outcomes were compared. The median follow up was 28.5 months.

Results: Mean age was 66.3±11.6 years old. The sex ratio was 2.83 (Male/Female).In group B, past history of type A aortic dissection were more frequent (p<.05) and mean aortic diameter of the descending thoracic aorta was higher (p<.0001). There were no other statically significant differences between the two groups. Overall in-hospital mortality was 11.8% in group A and 8.6% in group B (p=0.53). Overall survivals at one year were respectively 84.3% and 88% in group A and B (p=0.54). Overall survivals at five years were respectively 72.4% and 81.1% in group A and B (p=0.2). However a significant difference in mortality appeared at nine years follow up, giving the advantage to the endovascular treatment according to Kaplan-Meier estimates (p<0.05).

Conclusion: In hospital mortality and mild term results were not different between the two groups. Long term results seemed to be better in the endovascular group. These results suggest the potential interest of endovascular management of type B aortic syndrome particularly in term of long term survival. This point has to be confirmed in larger populations and longer follow up.

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Kinetics and prognostic value of D-Dimer in acute aortic dissection

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